CLAIMS:

1. A method of producing gamma corrected values, comprising:

(a) using initial, linearly derived gamma values to produce gray level images for a color;

(b) measuring the gray level images;

(c) obtaining the brightness-voltage (B-V) characteristics of the gray level images;

(d) calculating new gamma corrected values that produce a predetermined response from the obtained characteristics of the gray level images;

(e) using the newly calculated gamma corrected values in step (d) to produce new gray level images;

(f) measuring the gray level images produced in step (e);

(h) obtaining the brightness-data characteristics of the gray level images from the measurements of step (f); and

(i) repeating steps (d) through (h) until the gamma corrected values produce brightness-data characteristics that meet predetermined characteristics.

2. The method of claim 1, wherein step (i) further includes repeating steps (d) through (h) until the image's gray scale tracking meets predetermined performance levels.

3. The method of claim 1, wherein step (d) includes using errors in the brightness-data characteristics to calculate new gamma corrected values.

4. The method of claim 1, wherein the color is a primary color.

5. A method of gamma correcting an LCD display, comprising:

(a) storing initial, linearly derived, RED, GREEN, and BLUE gamma values in RED, GREEN, and BLUE gamma tables;

(b) using the initial linearly derived, RED, GREEN, and BLUE gamma values to produce RED, GREEN, and BLUE gray scale images using an LCD panel;

(c) measuring the RED, GREEN, and BLUE gray scale images produced in step (b);

(d) obtaining the brightness-voltage (B-V) characteristics of the LCD panel;

(e) using the obtained characteristics of the LCD panel to calculate RED, GREEN, and BLUE gamma correction values that produce a predetermined power-law response;

(f) storing the RED, GREEN, and BLUE gamma correction values calculated in step (e) in the RED, GREEN, and BLUE gamma tables;

(g) using the RED, GREEN, and BLUE gamma tables with the RED, GREEN, and BLUE gamma correction values stored in step (f) to produce new RED, GREEN, and BLUE gray scale images on the LCD panel;

(h) measuring the RED, GREEN, and BLUE gray scale images produced in step (g);

(i) obtaining the brightness-data characteristics of the LCD panel from the measurements taken in step (h); and

(j) repeating steps (e) through (i) until final gamma correction values that produce LCD panel brightness-data characteristics that meet predetermined power-law characteristics are obtained; and

(k) storing the final gamma correction values for future use.

6. The method of claim 5, wherein step (j) further includes repeating steps (e) through (i) until the LCD panel's grayscale tracking meets predetermined performance levels

7. The method of claim 5, wherein step (e) includes using errors in the brightness-data characteristics of the LCD panel to calculate new RED, GREEN, and BLUE gamma correction values.

8. A projector, comprising:

a set of at least three color gamma tables, each of which converts pixel data into gamma correction data for an associated color;

an LCD panel modulator for selectively modulating input light beams in response to gamma correction data from the at least three color gamma tables;

a light source that selectively applies at least three color light beams to the LCD panel modulator;

an input system for producing color digital pixel data for each of the at least three color gamma tables; and

an imaging system for producing an image on a viewing screen from the modulating input light beams from the LCD panel modulator;

wherein the gamma correction data in each of the at least three color gamma tables is determined by:

(a) using initial, linearly derived color gamma values to produce gray scale images;

(b) measuring the produced gray scale images;

(c) obtaining the brightness-voltage (B-V) characteristics of the produced gray scale images;

(d) calculating new gamma correction values that produce a predetermined response from the obtained characteristics of the produced gray scale images;

(e) using the newly calculated gamma correction values in step (d) to produce new gray scale images;

(f) measuring the gray scale images produced in step (e);

(h) obtaining the brightness characteristics from the measurements of step (f);

(i) repeating steps (d) through (h) until the gamma correction values produce brightness-data characteristics that meet predetermined characteristics; and

(j) storing the gamma correction values for each of the at least three colors in its associated gamma table.

9. The projector of claim 8, wherein step (i) further includes repeating steps (d) through (h) until the gamma correction values produce grayscale tracking that meets predetermined performance levels.

10. The projector of claim 8, wherein step (d) includes using errors in the brightness-data characteristics to calculate new gamma correction values.

11. The projector of claim 8, wherein the at least three gamma tables are RED, GREEN, and BLUE.

12. The projector of claim 8, wherein the predetermined response is a power-law response.

13. The projector of claim 8, wherein a controller controls the light source.

14. The projector of claim 8, further including an input system that produces digital pixel data from incoming data signals.

15. The projector of claim 14, wherein the incoming data signals are television signals.

16. The projector of claim 14, wherein the incoming data signals are from a computer.

17. The projector of claim 8, wherein the LCD panel modulator includes a digital-to-analog converter.

18. The projector of claim 17, wherein the LCD panel modulator further includes a driver for driving a line with analog information.

19. The projector of claim 18, wherein the LCD panel modulator further includes a switch matrix.

20. The projector of claim 17, wherein the imaging system includes an optical system that projects light onto a screen.